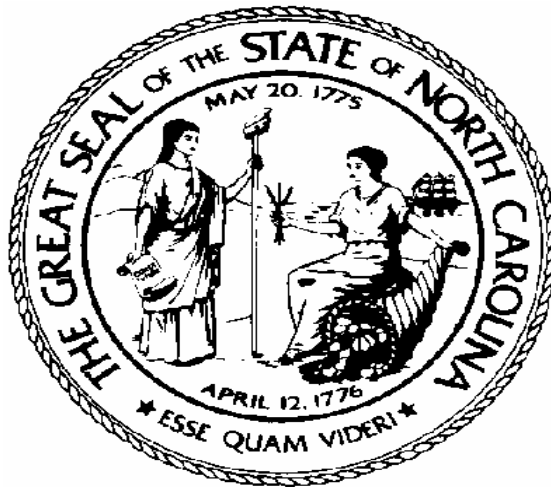


**Outcomes Evaluation Study
On
Services for People
With
Driving While Impaired (DWI) Offenses**

G.S. 122C-142.1



**Prepared for:
North Carolina General Assembly
Joint Legislative Commission on Governmental Operations**

December 2007

**North Carolina Department of Health and Human Services
Division of Mental Health, Developmental Disabilities and
Substance Abuse Services**

Introduction

The North Carolina General Assembly enacted Session Law 2005-312 in August, 2005, adding a new subsection to G.S. 122C-142.1 establishing a ...“outcomes evaluation study on the effectiveness of substance abuse services provided to persons who obtain a certificate of completion under G.S. 20-17.6 as a condition for restoration of a drivers’ license”. This is the initial report on the outcomes evaluation study. Additional reports will be submitted every two years to the Joint Legislative Commission on Governmental Operations.

Background

The North Carolina General Assembly has long supported laws that provide effective substance abuse interventions for individuals with driving while impaired (DWI) offenses. Statewide substance abuse interventions for individuals with DWI offenses were established in the early 1980s. Following the National Highway Traffic Safety Administration (NHTSA) guidelines for Alcohol Safety Action Programs (ASAP), the State required that all persons convicted of a DWI attend Alcohol Drug Education Traffic School (ADETS) and persons completing ADETS received less stringent sanctions. Later, the findings of a University of North Carolina study (Popkin et al, 1988), sponsored by the Division of Mental Health, Developmental Disabilities and Substance Abuse Services (DMH/DD/SAS), indicated that people with more severe alcohol problems might benefit from directed treatment and that offenders should not be given lesser sanctions for completing ADETS. Several other studies indicated that between twenty-seven (27%) and fifty-five percent (55%) of those arrested for a DWI had a substance use disorder (Miller, et al, 1986; Scoles, et al, 1986; Iffland & Grassnack, 1995). These studies led to a return to tougher sanctions for first offenders and treatment for those individuals with substance use disorders.

A large proportion of those driving while impaired go undetected (Voas, et al, 2001) and estimates based on roadside surveys suggest that the number of times a person drives drunk before being arrested has ranged from 300 (Voas & Hause, 1987) to 2,000 (Borkenstein, 1975). Voas (2001) suggests that findings such as these have implications for the courts and those assessing DWI offenders, “...few drivers coming before the courts for the first time are actually first-time offenders. Most have driven under the influence many times without being apprehended.” Therefore, the front line substance abuse services for these individuals play a vital role in effectively reducing recidivism and other substance abuse-related costs in our communities by identifying and referring those with substance use disorders to treatment and assisting all others in recognizing the seriousness of these offenses.

Over the years, the legislature has become increasingly tough on this crime, while making significant improvements in DWI services system-wide. Continued attention on effective interventions to reduce the incidence of driving while impaired is critical as a key element of our comprehensive plan. North Carolina ranks eighth in the nation for alcohol-related crashes (554) and seventh in the nation (tied with South Carolina) for fatal crashes involving at least one driver/motorcycle operator with a blood alcohol content (BAC) equal to or greater than 0.08. Thirty-five percent (35%) of automobile fatalities on North Carolina highways in 2006 were alcohol-related (NHTSA 2007).

Determining whether an individual arrested for DWI has a substance use disorder is a function of a clinical substance abuse assessment. The clinical substance abuse assessment is conducted by public and private DWI service agencies. The assessor uses a standardized clinical test in conjunction with a clinical interview to determine if the individual has a substance use disorder. If the person is determined to have a substance use disorder, he/she is required to complete substance abuse treatment. If the person is not identified to have a substance use disorder, he/she may be eligible to attend ADETS. Additional criteria for referral into ADETS

include: no previous DWI convictions; a BAC of 0.14 or less at the time of arrest, and compliance with a chemical test when requested. If these criteria are not met, the individual is not eligible for ADETS.

This report will focus on those individuals who were required to attend ADETS in order to be considered for reinstatement of their drivers' license. The educational program known as ADETS consists of a standardized curriculum that is taught in a group format by certified ADETS Instructors. Instructors attend State-approved instructor training and complete a supervised practicum to become certified. During the period of time analyzed for this study, the ADETS program was 10 hours of classroom instruction with up to 35 students per class. The remainder of this report provides detailed information regarding the methodology and data sources used, tables and graphs that illustrate the study findings, and study implications. Appendices are included for further reference.

Study Design and Methodology

The research objectives of this study were to:

- (1) Define the recidivism rate of individuals completing the ADETS program in North Carolina
- (2) Describe ADETS client characteristics that statistically may lead to a DWI-related re-arrest

The purpose of this study was to measure the DWI recidivism rates of clients completing the ADETS program in North Carolina. There are limited studies that provide a solid methodology for doing recidivism research. The most common definition of recidivism, and the definition most widely supported, is a subsequent DWI arrest (Chang et al, 2002). It is the most frequent method used to evaluate countermeasure programs and effectiveness (Wells-Parker, 1995). The Division defined recidivism as either an arrest or an arrest and conviction of a DWI or a related offense, a strategy that is heavily supported in the literature and recommended by the AAA Foundation for Traffic Safety 2002 report.

Although including both groups tends to increase the recidivism rate slightly, providing both offers a more informative and accurate assessment of recidivism. Including only DWI convictions would exclude an important subset of the population who were arrested, but never convicted of a DWI (e.g., plea bargaining, court leniency, etc) (AAA 2002). The absence of a conviction does not always indicate the absence of a substance use disorder.

The two data sources used for this study were from the North Carolina Administrative Office of the Courts and the North Carolina Department of Health and Human Services. The Administrative Office of the Courts (AOC) collects data on all offenders arrested and/or convicted of a crime in North Carolina. The AOC provided the Department with arrest data for a two year follow up period on all individuals who received DWI Services as a result of a conviction of a DWI –related crime during the years 2002-2004.

The selection of “related offenses” was based on the offenses the AOC uses to report its’ recidivism statistics. However, seven additional offenses were included to give a more accurate appraisal of the recidivism rate. Related offenses that were included in the recidivism analysis are listed in **Appendix 1**.

DMH/DD/SAS collects data on all individuals with DWI offenses who complete substance abuse services in order to obtain a “DHHS Certificate of Completion DMH508-R” to be considered for reinstatement of a driver’s license. The forms are reviewed for accuracy and completeness and forwarded to the Division of Motor Vehicles. Data includes: individual demographics; prior offenses; BAC; and verification of completion

of an appropriate clinical substance abuse assessment and substance abuse services. (See **Appendix 2** for a copy of the DMH508-R form).

For the purposes of this study, individuals completing ADETS from July 2002 through August 2004 were included. This allowed a two year follow up period for study. There were 6,869 cases used in this study. The match rate was 65%.

The study was limited to 2002 forward because DMH-508-R data received prior to 2002 was purged from the DMH/DD/SAS server as part of a regularly scheduled purging protocol. In accordance with recommendations of the AAA Foundation report by Lapham et al (2000) , out of state cases were removed from the sample because comparable data was not available.

Results

Approximately 20% of all individuals seeking services for a DWI conviction were referred to ADETS after completion of a clinical substance abuse assessment. This part of the report focuses on the description of the sample of ADETS students matched to the AOC database and their recidivist behavior. (See **Appendix 3** for a flowchart of program participation.)

Demographic Characteristics: For this sample, the average student participating in the ADETS program was a young, single, white male, with a high school education (**Table 1**). Over three-fourths of ADETS participants were male and over two-thirds were white. Thirty-five percent of the sample completed high school or received their GED, while 42% had some schooling beyond high school. The large majority of students were single (59%).

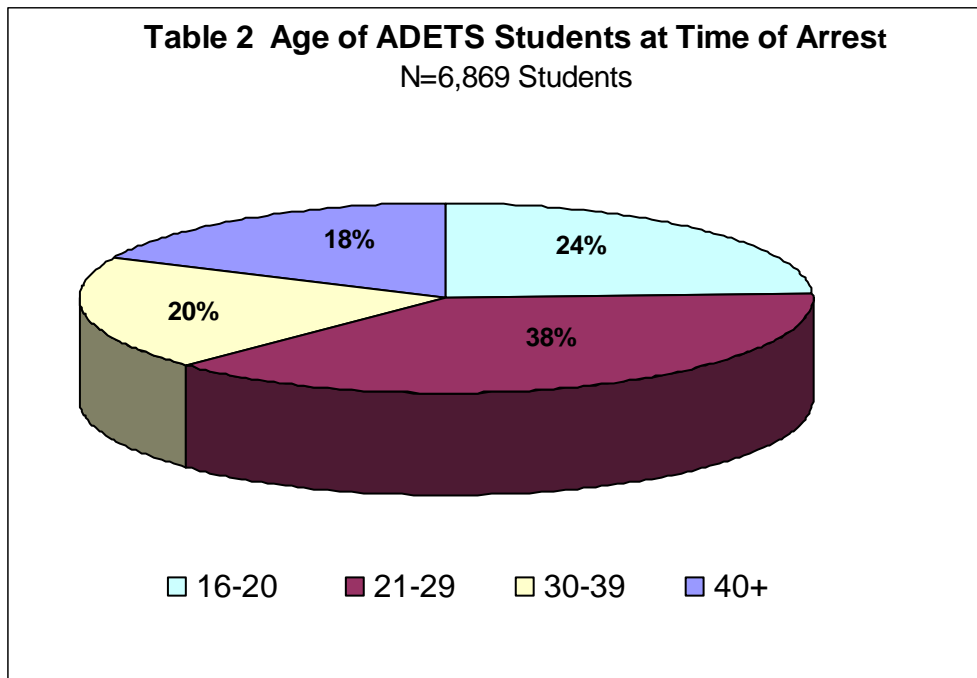
Initial DWI Arrest: The 6,869 clients in the study had a total of 8,284 initial DWI or DWI-related charges. While the large majority of the current charges were for DWI, arrests for underage drinking and driving (under 21 years of age) made up 18% of the DWI/DWI-related charges. In addition to the DWI or DWI-related charges, clients also had other miscellaneous offenses charged against them, totaling 9,688 non-DWI/DWI-related offenses, with two-thirds of those being civil revocation of a driver's license (67%) and more than a quarter traffic-related (26%). A small number were additional charges of public order offenses (5%) and drug/alcohol possession offenses (2%). As seen in the profile of ADETS clients, below, only three percent of the sample had just one charge (the current DWI charge for which they were arrested and referred to the program). An additional 46% of the sample had two charges and the remaining 51% had three or more charges related to their initial DWI arrest.

Table 1 PROFILE OF ADETS Participants
N=6,869 Students

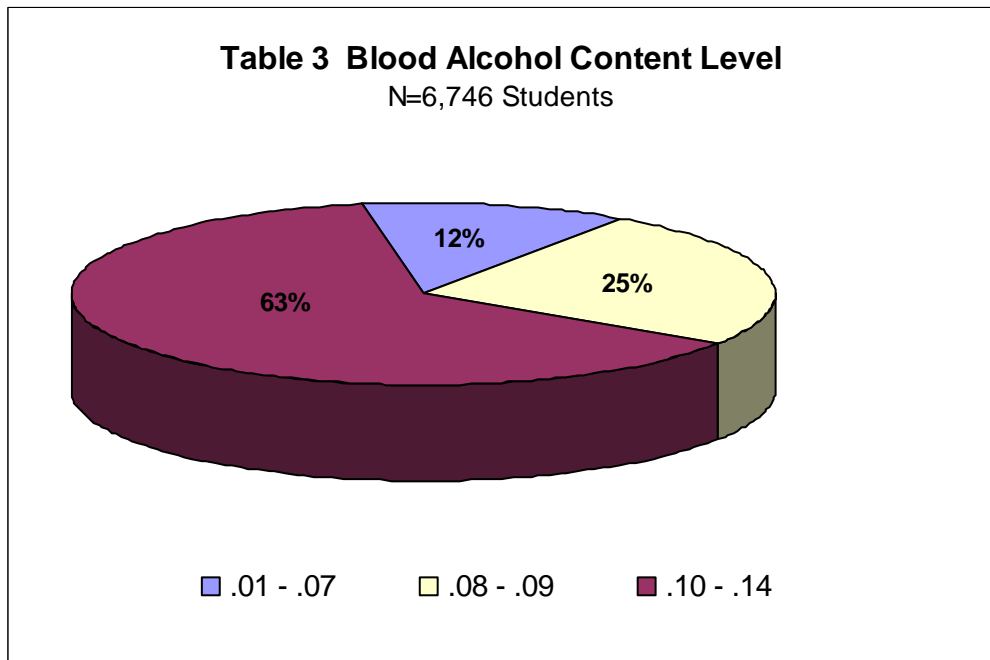
Age at Time of Arrest:	
Mean:	29 Years
Median:	26 Years
Gender:	
	%
Male	75.7
Female	24.3
Race:	
	%
White	68.8
African-American	15.4
Hispanic	13.2
Other	2.6
Education Status:	
	%
Less than 12 th Grade	23.4
Completed High School/GED	34.8
Some College	29.2
Bachelor's Degree	10.5
Graduate Degree	2.1
Marital Status:	
	%
Single	59.1
Married	25.2
Divorced/Separated	15.7
Total Number of Charges Related to Initial DWI Offense:	
	%
One Charge	3.0
Two Charges	46.0
Three (+) Charges	51.0
DWI Re-arrests:	
	%
One-Year Follow-up Period	4.8
Two-Year Follow-up Period	9.4
DWI Recidivist Convictions:	
	%
One-Year Follow-up Period	3.4
Two-Year Follow-up Period	6.5
Months from Completion of ADETS to DWI Re-arrest:	
	11.9

Of the 648 participants who were rearrested in the 2 year follow up period, 90% had one re-arrest, 9% had two re-arrests, and 1% had three additional arrests. One person had four re-arrests in the two year period.

As shown in **Table 2**, 62% of ADETS students were under the age of 30. These demographics are congruent with individuals with DWI offenses nationally (Arria et al., 2005).



Blood Alcohol Content Levels: **Table 3** displays the blood alcohol content (BAC) levels of ADETS students at the time of arrest. Only 12% had levels under 0.08 while the majority (63%) was well above the legal limit.



*Missing BAC levels for 109 students, of which 15 students were rearrested in the two-year follow-up period. In addition, 14 students were noted with a BAC level above .14. These are most likely data entry errors and omissions. Of the 14, five were rearrested in the two-year follow-up period.

When age is taken into consideration, those under 21 years of age were more likely to have a lower BAC level compared to all the other age groups. Slightly under three-fourths of students registered between a .10 and .14 BAC level for each age category, except 16-20 year olds (**Table 4**). Almost half (48%) of 16-20 year olds had a BAC level under .08.

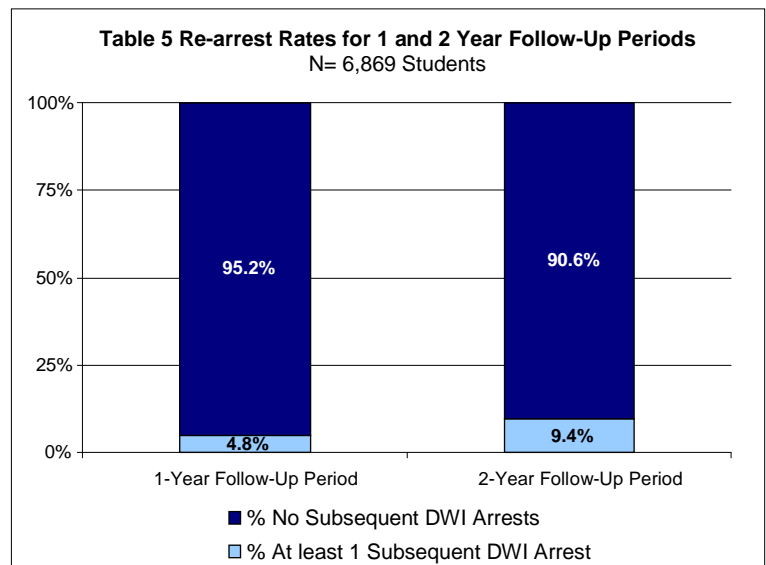
Table 4 Blood Alcohol Content Levels by Age at Time of Arrest

Age Categories	N*	Blood Alcohol Content (BAC) Level		
		.01 - .07	.08 - .09	.10 - .14
16 – 20	1,589	769 48.4%	313 19.7%	507 31.9%
21 – 29	2,613	22 0.9%	704 26.9%	1,887 72.2%
30 – 39	1,321	16 1.2%	336 25.4%	969 73.4%
40+	1,223	10 0.8%	314 25.7%	899 73.5%
TOTAL	6,746	817 12.1%	1,667 24.7%	4,262 63.2%

*Missing BAC levels for 109 students, of which 15 students were rearrested in the two-year follow-up period. In addition, 14 students were noted with a BAC level above .14. These are most likely data entry errors and omissions. Of the 14, five were rearrested in the two-year follow-up period.

DWI Recidivism: As evident in **Table 5**, very few clients in the sample were rearrested for a subsequent DWI in the one or two-year follow-up periods (4.8% and 9.4%, respectively). The average time to the DWI re-arrest for ADETS students rearrested was 11.9 months overall. Those 30 to 39 years of age had the quickest time to re-arrest (average of 10.9 months) while 40 year olds and older were rearrested an average of 13.2 months from the time they completed the program.

When reviewing the effectiveness of DUI programs, researchers compared and reviewed 194 studies and found an average rate of recidivism of 19% for a two year period (Wells-Parker, 1995). The Texas Commission on Alcohol and Drug Abuse looked at first offenders rearrested for a second DWI in Texas and found four-year cumulative recidivism rates ranging from 20% to 27% (Liang, 1993). South Carolina studied that state's recidivism data for a three year period comparing the South Carolina level one educational program, similar to ADETS, PRIME for Life, with treatment only and found PRIME for Life was at 7.2 %, and treatment was at 9.9%. (Nalty 2003).



Those 16 to 20 years of age were more likely to be rearrested than older students (**Table 6**). While less than 10% of the overall sample had a DWI arrest within two years from the time they completed the program, approximately 14% of those under 21 years of age were rearrested within two years and only 5% of 40 year olds and older were rearrested in two years.

**Table 6 Re-arrest Rates for 1 and 2 Year Follow-Up Periods
By Age at Time of Arrest**

Age Groups	N	Re-arrest for Subsequent DWI	
		1-Year Follow-up Period	2-Year Follow-up Period
16 - 20	1,659	124 7.5%	229 13.8%
21 - 29	2,628	124 4.7%	253 9.6%
30 - 39	1,342	56 4.2%	104 7.8%
40 +	1,240	28 2.2%	62 5.0%
TOTAL	6,869	332 4.8%	648 9.4%

Another factor related to re-arrests is the BAC levels at the time of the initial DWI arrest. For both the one and two-year follow-up periods, those with a BAC level under .08 were more likely to be rearrested (**Table 7**). This may be explained by the age of the participants since those 16 to 20 years of age were most likely to have a BAC level under .08.

**Table 7 Re-arrest Rates for 1 and 2 Year Follow-Up Periods
by Blood Alcohol Content Levels**

Blood Alcohol Content (BAC) Level	N*	Re-arrest for Subsequent DWI	
		1-Year Follow-up Period	2-Year Follow-up Period
.01 - .07	817	54 6.6%	104 12.7%
.08 - .09	1,667	68 4.1%	140 8.4%
.10 - .14	4,262	203 4.8%	384 9.0%
TOTAL	6,746	325 4.8%	628 9.3%

*Missing BAC levels for 109 students, of which 15 students were rearrested in the two-year follow-up period. In addition, 14 students were noted with a BAC level above .14. These are most likely data entry errors and omissions. Of the 14, five were rearrested in the two-year follow-up period.

Implications

The recidivism rate for individuals who were convicted of a DWI in North Carolina and completed an ADETS program between the years of 2002-2006 was 4.8% for the one-year follow-up period and 9.4% for the two-year follow-up. These rates indicate the overall success of the ADETS program.

A significant finding was that individuals under the age of 21 had a much higher rate of recidivism (13.8%) than others completing the ADETS program. This may be a reflection of level of maturity and phase of human development. Consideration of curricula to address the developmental issues of the underage group may provide an improved response and better outcomes in the future.

The NC General Assembly has given the program consistent support throughout the years. Recent legislation led to several improvements including an increase in classroom instruction and a decrease in the class size. These changes became effective October 1, 2006. Staff qualifications were also increased and go into effect in January 2009. Ongoing outcomes evaluation studies will ensure continued emphasis on effectiveness and quality improvements for services for people with DWI offenses.

DMH/DD/SAS continues to move forward with evidence-based practices and programs for people with DWI offenses. This is supported by national trends across the country. In looking for ways to improve the current program, a pilot study was implemented to consider the usability of a well-documented, evidence-based curriculum already in use in multiple states. Increasing standardization will allow for effective study of the program. Evidence-based curricula and protocols that are consistently evaluated and updated to reflect the most current body of knowledge on substance abuse will lead to more effective outcomes.

A major improvement in data gathering for DWI services data has been implemented and will provide more effective and efficient monitoring and verification of services for this population. The DMH-508-R (Certificate of Completion) form was transformed into an electronic form (E508). The data is maintained through a web-based system. The system was piloted with a representative sample of DWI providers to ensure usability. All authorized DWI providers attended regional day-long trainings on the new system during the spring, summer and fall of 2006. As of October 2006, all providers were online with the E508 system.

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Appendix 1

List of Related DWI Offense Codes and Offenses Used in Recidivism Analysis

Offense Code	Offense	Offense Code	Offense
4175	Drink beer/wine while driving	5517	DWI (.10)- Level 1
5403	DUI-DRUGS	5518	DWI (.10)- Level 2
5404	DUI-Alcoholic beverage	5519	DWI (.10)- Level 3
5405	Driving while impaired	5520	DWI (.10)- Level 4
5406	Felony death by vehicle	5521	DWI (.10)- Level 5
5413	Reckless driving aft alcohol	5522	DWI (.10)- Level 5- Aid/Abet
5423	DUI-driving instructor	5526	DWI-Provisional license
5431	Drive w/.1 or more bl alc	5527	Habitual impaired driving
5453	Allow intox person driver	5570	Drive after drinking provisional license
5459	DWI 2 nd offense	5594	Open cont after cons alc 1st
5471	Aid and abet impaired driving	5595	Open cont after cons alc subofn
5472	DUI-2 nd offense	5610	DWI commercial vehicle
5473	DUI- 3 rd offense	5615	Commercial DWI under influence
5511	DWI-Level 1	5620	Commercial DWI >=.04
5512	DWI-Level 2	5622	Consume alcohol commercial vehicle
5513	DWI-Level 3	5624	Consume alcohol school bus/child vehicle
5514	DWI-Level 4	6230	DWI motor boat/vessel
5515	DWI-Level 5	9956	Drive after drink-prov license
5516	DWI-Level 5- Aid/Abet	9958	Aid and abet DWI

**North Carolina Department of Health and Human Services DWI Certificates of Completion
(DMH 508-R)**

Transferred to: _____

This information has been disclosed to you from records protected by Federal confidentiality rules (42 CFR Part 2). The Federal rules prohibit you from making any further disclosure of this information unless further disclosure is expressly permitted by the written consent of the person to whom it pertains or so otherwise permitted by 42 CFR Part 2. A general authorization for the release of medical or other information is NOT sufficient for this purpose. The Federal rules restrict any use of the information in criminally investigate or prosecute any alcohol or drug abuse patient.

1. Name: _____
First Middle Last Maiden

2. Address: _____
Street/Road City State Zip

3. Telephone No.: () _____ () _____
Home Work

4. Driver's License #: [][][][][][][][] 5. State Other than NC: [][]

6. Gender:
01 ☐ Male
02 ☐ Female

7. Race/Ethnicity:
01 ☐ White
02 ☐ African American
03 ☐ Native American
04 ☐ Asian/Pacific Islander
05 ☐ Hispanic
06 ☐ Other (List): _____

8. Education Completed:
01 ☐ Less than 8th Grade
02 ☐ Less than 9th Grade
03 ☐ Less than 12th Grade
04 ☐ Completed HB/GED
05 ☐ Some College
06 ☐ Bachelor's Degree
07 ☐ Graduate Degree

9. Marital Status:
01 ☐ Never Married
02 ☐ Married
03 ☐ Divorced
04 ☐ Separated
05 ☐ Widowed

10. Date of Birth: ____/____/____
mm dd yy

11. County of Res.: _____

12. Arrest Date: ____/____/____ mm dd yy

13. Conviction Date: ____/____/____ mm dd yy

14. Docket #: [][] CR [][][][][][][]

15. Interview Date: ____ / ____ / ____ - 16. Number of Prior DWI Convictions: []

17. 01 ☐ Pre-Trial
02 ☒ Post-Trial 18. BAC 0. [] [] Local Agency Use Only:

19. Service Level Recommended: 01 ☐ ADETS 02 ☐ 20/30 03 ☐ 40/60 04 ☒ 60/90 05 ☐ 60 06 ☐ Special

20. Facility Code: [][][][][] 21. Release of Information on File? YES _____ NO _____

22. ASAM Certified Physician's Signature: _____ 23. Certificate #: [][][][]

24. Certified Counselor's Signature: _____ 25. Certification #: [][][][][]

 26. Expires. Date: ____ / ____ / ____
mm dd yy

27. Assessor's Name (Please Print) if different from #22 or #24: _____

28. Date Started: ____/____/____ 29. Date Completed: ____/____/____ 30. School #:

mm dd yy mm dd yy

31. Certified Instructor's Signature: _____ 32. Expire. Date: ____/____/____

mm dd yy

33. Date Sessions Started: / / 34. Date Sessions Completed: / / 35. Facility Code:

36. Service Level Completed: 01 ☐ ADETS 02 ☐ 20/30 03 ☐ 40/60 04 ☐ 80/90 05 ☐ 90 06 ☐ Special

37. Fees Charged: \$ 38. Fees Received: \$

39. Clinician's Signature: _____ 40. Completion Date**: / /

^a Entered only upon completion of financial obligation.

Appendix 3

Participation in ADETS Program by Study Sample

